

Amendments to the Specification:

Please kindly amend the specification as follows:

For the paragraph beginning at Page 5, Line 20 please delete the existing paragraph and insert the following paragraph:

U.S. Pat. No. 5,116,740 (*supra*) and VanCott T. C *et al.*, *J. Immunol. Meth.* 183:103-117 (1995), assessed the oligomeric structure and antigenic properties of an affinity purified gp160 protein (oligo-gp160 or "o-gp160") using biosensor technology and identified the existence of tetrameric, dimeric and monomeric forms of the protein. (VanCott and co-author Birx are named co-inventors in this application.) Monoclonal antibodies specific for oligomeric gp160 reacted with discontinuous epitopes within monomeric gp120 and several linear epitopes within gp120 (V3) and gp41. Sera from HIV-infected subjects from around the world, including places where HIV-1 subtypes A-F and O (African) were reactive with oligo-gp160. This indicated the preservation of conserved antigenic epitopes in this material. Furthermore, enhanced immunologic reactivity per gp160 molecule was obtained with oligo-gp160 as compared to other current HIV-1IIIB subunit monomeric envelope gp120/gp160 immunogens, leading the authors to conclude that this material had higher HIV-1 envelope protein mimicry. ~~Anti-HIV-1~~ Anti-HIV-1 serum antibodies during acute infection could be detected by oligo-gp160 prior to their detectability with either a recombinant, monomeric gp120 protein or several commercial HIV-1 screening kits. The authors concluded that the oligomeric nature of this gp160 protein preparation and its high reactivity with divergent mAbs and HIV-1 sera support its use as an HIV-1 immunogen.

For the paragraph beginning at Page 8, Line 17 please delete the existing paragraph and insert the following paragraph:

In the above vaccine, the antigenic protein is complexed with proteosomes which are preferably hydrophobic, multimolecular membrane proteins. The vaccine composition is preferably formed by: (a) bonding the hydrophobic material to the protein or peptide to form a hydrophobic-hydrophilic compound; and (b) admixing the compound with the proteosomes, bioadhesive nanoemulsions, or both such that the antigen is complexed with the proteosomes or nanoemulsion. The admixing step ~~[[is]]~~ may be performed in the presence of a detergent, and is followed by the step of removing the detergent by dialysis. Alternatively the admixing step is performed lyophilization.

For the paragraph beginning at Page 15, Line 22 please delete the existing paragraph and insert the following paragraph:

Because complexing depends upon the presence of hydrophobic sites in the protein or peptide, the number of peptide molecules that can be complexed to the proteosomes is far greater than the number that can be complexed by ordinary covalent bonding systems. Each proteosome can be complexed with between about 6 and ~~[[−30]]~~ 30 protein or peptide molecules.

For the paragraph beginning at Page 20, Line 23 please delete the existing paragraph and insert the following paragraph:

A preferred antigenic protein for use herein is an envelope protein of ~~[[HIV-1]]~~ HIV-1. The mature envelope proteins in virions and HIV-infected cells are ~~[[gp1-20]]~~ gp120 and gp41, which are derived from a single precursor, gp160. The advantages of a gp160 protein having antigenic epitopes in a native or undamaged form is important for a useful vaccine. This has been discussed above (See: U.S. Pat. No. 5,116,740; VanCott T. C *et al.*, *J Immunol. Meth.* 1995, 183:103-117). A preferred form of the gp160 is oligo-gp160 (or o-gp160), as disclosed in these references, because of its maintenance of antigenic epitopes, presumably in native-like form, and due to the presence of gp160 dimeric and tetrameric structures in this preparation.

For the paragraph beginning at Page 22, Line 7 please delete the existing paragraph and insert the following paragraph:

A single cell clone of HUT78 cells has been infected with human immunodeficiency virus type 1 (HIV-1), resulting in a cell line which continuously produces virus. Clone 6D5 is susceptible to chronic infection with HIV-1, as described in Getchell, *et al.*, *J. Clin. Microbiol.* 23:737-742 (1986). Clone 6D5 is infected with a specific strain of HIV-1, HTLV-III₄₅₁, to produce the infected cell line 6D5451 (deposited with the American Type Culture Collection under the Budapest Treaty). The infected cell line is then grown in serum-free medium, by pelleting 6D5451 cells and resuspending them in serum-free medium (such as HB101 or HB104 medium, commercially available from Du Pont). The medium also contains growth supplements such as transferrin, insulin, and bovine serum albumin. To assist in the growth of cells, the cells were subcultured every four ~~[[day]]~~ days. The 6D541 cells were grown for 2 to 3 generations. When serum-free medium is used, glycoprotein gp160 can be separated from other proteins in the medium.